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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

ZIMMERMAN, JOHN J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1775

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DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/834,848

Applicant(s)

HOUGHAM ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

FIRST OFFICE ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 6-15 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 4, 6-15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Claims 6-15 provide for the use of an absorber member, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

6. Proper Markush language is "from the group consisting of" instead of "from the group of" (e.g. see claims 3, 4 and 9).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,164,606).

9. Jackson discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal to enhance capillary flow (e.g. see column 2, lines 12-22). Spirig discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal to enhance capillary flow (e.g. see claim 1). It is the examiner's position that an amount considered an excess of liquid solder constitutes spillage. In any event, a preamble is generally not accorded

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any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

10. Claims 1-4, 6 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Spirig (U.S. Patent 4,416,408) or Kent (U.S. Patent 5,305,941).

11. Spirig discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal such as copper to enhance capillary flow (e.g. see claim 1). Kent discloses a wick for absorbing excess liquid metal wherein the strands are coated with a metal such as copper (e.g. see column 4, lines 49-60). It is the examiner's position that an amount considered an excess of liquid solder constitutes spillage. In any event, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478,

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481 (CCPA 1951). Applicant's claims recite the intended use of the transfer tool to recover mercury (e.g. see claim 2). Spirig's and Kent's copper coated meshes, however, would be perfectly capable of such a function even though they are not specifically disclosed for such an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

12. Claims 1-4, 6-8, 11-12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628).

13. Yan discloses removing mercury from liquid using capillary tubes packed with gold coated zeolite particles (e.g. see Example 2; column 8, lines 45-66).

14. Claims 1-3, 6-8, 11-12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Williston (U.S. Patent 3,232,033).

15. Williston discloses that spilled mercury becomes a hazard (e.g. column 1, lines 25-29) and uses a porous wool coated with gold to remove mercury from the environment (e.g. see column 2, lines 4-31).

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16. Claims 1-9, 11-12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasenpusch (German Offenlegungsschrift 3729030 A1).

17. Hasenpusch discloses removing spilled mercury using mercury absorbent gold coated metal particles (e.g. see abstract and entire document for various materials).

18. Claims 1-4, 6-7 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Seidenberger (U.S. Patent 4,076,553).

19. Seidenberger discloses contacting spilled mercury with a transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift 3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387).

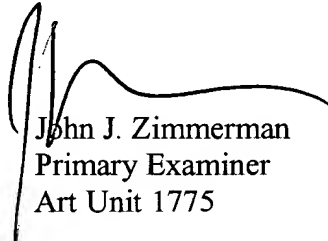
22. Seidenberger discloses contacting spilled mercury with a wicking transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14). Seidenberger differs from some claims in that Seidenberger uses cheaper zinc to coat his wick instead of gold. Hasenpusch, however, clearly discloses that it is well understood in the prior art that absorbers of spilled mercury can also be plated with gold in order to quickly form an amalgam with the mercury for good clean up (e.g. see abstract and entire article). In view of Hasenpusch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use gold to coat the wicking transfer tool of Seidenberger because Hasenpusch clearly discloses that gold is also understood in the art to be a particularly good coating material for mercury spill clean up. Seidenberger may also differ from the claims in that Seidenberger's wicking transfer tool is a wool instead of a braid. Jackson (e.g. see Figure 2) and Spirig (e.g. see Figures 1-2), however, clearly show that one of ordinary skill in the art clearly understands that liquid metal can also be absorbed by wicking tools in the braided form. This is a fairly disclosed concept that anyone in the liquid metal absorbing art would be aware of and understand. In view of Jackson and Spirig, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a braided form for the wicking tool of Seidenberger because Jackson and Spirig clearly show that braided wicking tools are understood in the art to be particularly effective at absorbing liquid metal. As further evidence that one of ordinary skill in the art understands that the use of cloths and screens to wick is conventional, Gunter clearly shows this concept specifically applied to the wicking of mercury is understood (e.g. column 5, lines 24-31).

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Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited references serve to further establish the level of ordinary skill in the art.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
September 20, 2002